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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,021	03/11/2004	Dong-Won Park	ABS-1470 US	7575
32605 7590 07/17/2007 MACPHERSON KWOK CHEN & HEID LLP 2033 GATEWAY PLACE SUITE 400 SAN JOSE, CA 95110			EXAMINER AMADIZ, RODNEY	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 07/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/799,021	PARK ET AL.	
	Examiner	Art Unit	
	Rodney Amadiz	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-17 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 12 is/are rejected.
- 7) ☒ Claim(s) 4-11, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. Please provide a more detailed title that encompasses the main invention. For instance, the claims are directed to the difference between still and moving images and the action that takes place as a result of having such images; therefore, the title should focus on this subject matter.

Claim Rejections - 35 USC § 103

2. Claims 1, 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konno et al. (USPGPUB 2003/0080932—herein referred to as “Konno”) in view of Park (U.S. Patent 2001/0043181—herein referred to as “Park”).

As to **Claim 1**, Konno teaches an apparatus for driving a liquid crystal display including a plurality of pixels arranged in a matrix, the apparatus comprising: a signal controller (***Fig. 18, Reference Number 102***) supplying the image data for the data driver (***Fig. 18, Reference Number 107***), determining image types of images represented by the image data in two adjacent frames during an interval period based on the difference in the image data between two adjacent frames during a filtering period, and suspending image data modification during a predetermined period if the image types of images during the interval period are determined to be still images (***Pgs. 12-13, ¶¶s 141-147-note that the Examiner is interpreting the interval period and***

the filtering period to be the same period, i.e. the period when the image type is determined). Konno, however, fails to teach a gray voltage generator generating a plurality of gray voltages and a data driver selecting data voltages from the gray voltages corresponding to image data and applying the data voltages to the pixels. Examiner cites Park to teach a gray voltage generator generating a plurality of gray voltages (**Fig. 5, Reference Number 4**) and a data driver selecting data voltages from the gray voltages corresponding to image data and applying the data voltages to the pixels (**Fig. 5, Reference Numbers 1-5**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate a gray voltage generator and a data drive that selects voltages from the gray voltages as taught by Park in the display device taught by Konno in order to provide gray-scale to the display.

As to **Claim 3**, Konno teaches the signal controller determining the image types as motion images when the number of the pixels having different image data between two adjacent frames or the number of the pixels having the difference in the image data between two adjacent frames larger than a predetermined value is more, than a predetermined number (**Pg. 13, ¶ 145**).

As to **Claim 12**, Konno teaches the signal controller further comprising a frame memory storing image data for at least one frame (**Fig. 23, Reference Numbers 103A and 103B**).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Konno and Park as applied to claims 1 and 3 above, and further in view of (Applicant's Admitted Prior Art (herein referred to as "AAPA")).

As to **Claim 2**, Konno, as modified by Park fails to teach the image data modification including at least one of image data modifications that include DCC (dynamic capacitance compensation), ACCE (adaptive color contrast enhancement), and ACC (accurate color capture). Examiner cites AAPA to teach that it is well known in the art to use predetermined control operations that modify an image data such as DCC (dynamic capacitance compensation), ACCE (adaptive color contrast enhancement), and ACC (accurate color capture) (***Pg. 1, lines 21-27***). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the use of either one of DCC, ACC or ACCE as taught by AAPA in the display device taught by Konno and Park in order to improve the image deterioration due to the response delay (***Pg. 1, lines 21-27***).

Allowable Subject Matter

4. Claim 13 is allowed.
5. The following is a statement of reasons for the indication of allowable subject matter: As for Claim 13, the above cited references have failed to teach or suggest, either alone or in combination: "generating a third comparison signal for each of first periods, the third comparison signal including pulses generated when the number of the counted pulses in the respective second comparison signals is larger than a second predetermined number; determining that image data for respective second periods following the first periods represent motion image when the respective number of the pulses included in the third comparison signals is larger than a third determined

number, determining as still image if not; and suspending predetermined control operation if the image data represent still image.”

6. Claims 4-11, 18 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: As for Claim 4, the above cited references have failed to teach or suggest, either alone or in combination: “generating a third comparison signal for each of first periods, the third comparison signal having pulses generated when the number of the counted pulses in the respective second comparison signals is larger than a second predetermined number; and a frame state detector determining that image data for respective second periods following the first periods represent motion images if the respective number of the pulses contained in the third comparison signals for the first periods is more than a third predetermined number and, that if not, the image data for the second periods represent as still images, and outputting an image type selection signal having a first state or a second state based on the determination.”

Response to Arguments

8. Applicant's arguments filed April 17, 2007 have been fully considered but they are not persuasive. The Applicant states that Konno does not teach using filtering periods separated by interval periods. The Applicant also states that there is no

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teaching of Konno determining the image type during a filtering period and to determine the image type during an interval period based on the image type for the filtering period, wherein the image type for the filtering period are decided by comparing present and previous frames (Pg. 8, lines 8-12). The claims however, do not recite that the filtering period is separated by interval periods. Furthermore, the claim does not distinguish the difference between a filtering period and an interval period; therefore, the Examiner has interpreted both periods, filtering and interval, to be the same period. For instance, Konno determines whether an image is a still image or a moving image by comparing every two adjacent frames. The period that it takes to compare the two frames is both the filtering period and the interval period, thereby reading on claim 1. The Applicant also argues that Konno does not teach suspending image data modification based on the image type that is determined (Pg. 8, lines 21-22). The Examiner respectfully disagrees. Konno teaches that it is not necessary to intermittently light the illuminator (Pg. 12, ¶ 145). Changes in the illuminator alter the image data as viewed by the user, thereby causing image data modification.

9. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., filtering periods separated by interval periods (pg. 8, lines 8-9) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

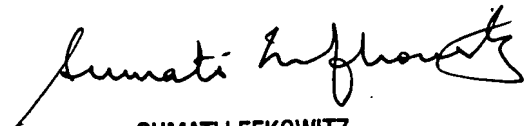
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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